

**We Claim:**

1. A hybrid communication terminal - alarm system, comprising:
  - a communication terminal for connection to a communication network;
  - means for monitoring the environment and providing a sensor reading signal indicative of the level of an environmental agent;
  - an alarm mode controller for operating said communication terminal in an alarm mode according to said sensor reading signal.
2. A system as claimed in claim 1, further comprising a power turn-on unit for permanently powering said means for monitoring.
3. A system as claimed in claim 1, further comprising a power on/off switch for turning the power to said system 'on' and a power turn-on unit for operating said alarm mode controller in a sleep power mode whenever said on/off switch is 'off'.
4. A system as claimed in claim 1, wherein said alarm mode controller comprises:
  - a memory for storing a threshold for indicating a hazardous level of said environmental agent;
  - a comparator unit for receiving said sensor reading signal from said means for monitoring and said threshold from said memory and providing an alarm signal whenever said threshold is violated; and
  - an alarm driver for receiving said alarm signal and initiating an alarm mode of operation sequence.
5. A system as claimed in claim 4, further comprising an alarm for alarming said threshold violation.

6. A system as claimed in claim 5, wherein said alarm is one of an audio, video and mechanical alarm.

7. A system as claimed in claim 4, wherein said alarm driver triggers transmission of a distress signal by establishing an automatic connection over said network using said communication terminal on receipt of said alarm signal.

8. A system as claimed in claim 1, wherein said means for monitoring is one of a smoke detector, a chemical agents detector, a radiation detector and a biological agent detector.

9. A system as claimed in claim 1, wherein said means for monitoring comprises a plurality of detectors, each for monitoring presence of a specific environmental agent.

10. A system as claimed in claim 1, wherein said means for monitoring is a biosensor array.

11. A system as claimed in claim 1, wherein said means for monitoring is a digital sensor.

12. A system as claimed in claim 1, wherein said means for monitoring is an analog sensor, further comprising an analog-to-digital converter for formatting said sensor reading into a digital sensor reading.

13. A system as claimed in claim 7 wherein said communication terminal comprises a communication functions control unit for generating said distress signal, and encoding said distress signal into an outgoing message using a communication protocol, and a transmitter for sending said message over said communication network to a specified location.

14. A system as claimed in claim 12, wherein said communication terminal includes a receiver for enabling reception of incoming messages over said network.

15. A system as claimed in claim 12, wherein said communication terminal further comprises a keyboard for enabling transmission of alphanumeric messages over said network and a display for enabling reception of video messages over said network.

16. A system as claimed in claim 1, wherein said communication device is one of a cellular telephone, a fixed telephone, a cordless telephone, a pager and a fax machine.

17. A system as claimed in claim 1, wherein said communication device is one of a personal digital assistant, a laptop and a desktop computer equipped with a communication functions control unit for generating a distress signal, and encoding said distress signal into an outgoing message using a communication protocol, and a transmitter for sending said message over said communication network to a specified location.

18. A system as claimed in claim 1, wherein said means for monitoring comprises a plurality of sensors ( $S_n$ ) and a multiplexer for extending the input/output capabilities while using a single input of said alarm mode controller.

19. A method for alarming presence of a hazardous agent, comprising:

equipping a communication terminal with means for monitoring the environment for generating a sensor reading signal indicative of the level of an hazardous agent; and

further equipping said communication terminal with an alarm mode controller for continuously comparing said sensor reading with a threshold, detecting a threshold violation and initiating an alarm mode protocol.

20. A method as claimed in claim 19, wherein said alarm mode protocol performs the steps of:

turning 'on' said communication terminal if turned 'off';

interrupting normal operation mode of said communication terminal if performing a normal communication routine;

transmitting a distress signal by establishing an automatic connection over said network using said communication terminal; and

providing an alarm to indicate said threshold violation.

21. A method as claimed in claim 20, wherein said distress signal includes an identification of said communication terminal and an information on the present location of said communication terminal.

22. A method as claimed in claim 20, further comprising indicating the gravity of said threshold violation.

23. A method as claimed in claim 19, wherein said means for monitoring are permanently powered, while said alarm mode controller operates in a sleep power mode whenever said communication terminal is turned 'off'.

24. A method as claimed in claim 19, further comprising receiving instructions over said communication network regarding immediate protective measures for minimizing the effects of said hazardous agent.

25. A method for alarming presence of a hazardous agent, comprising:

equipping a communication terminal with means for detecting an dangerous level of an environmental agent; and

further equipping said communication terminal with an alarm mode controller for initiating an alarm mode protocol in response to a dangerous level of an hazardous agent.

26. A method as claimed in claim 25, further comprising:

equipping said means for detecting with a plurality of detectors specialized for measuring and alarming presence of a plurality of respective environmental agents;

multiplexing a plurality of detector measurements on an input of said alarm mode controller; and

reading sequentially said detector measurements to detect any dangerous level of any of said environmental agent.